



HELPPFILE

Correct screen resolution for LCD

Q Could you give me some direction as to the correct resolution to set for my new LCD monitor? I have replaced my 21in CRT with a 19in Acer AL1916W widescreen model. My previous CRT display had a resolution of 1,024x768, which is the current setting I am using with the LCD. However, I think this is wrong.

Alan Jacques, alanjacques@btinternet.com

A An LCD monitor is completely unlike a CRT monitor when it comes to its display resolution. An LCD screen contains a fixed number of elements called pixels. CRT monitors can display images at many different resolutions because the phosphor coating on the screen is continuous, and can display a range of different resolutions by changing the speed of the scan beam.

It is always a good idea to set an LCD screen to use its native resolution, which for your Acer monitor is 1,440x900. If you try to use a different resolution, the monitor will either display a small image or attempt to reproduce the resolution you have requested using 'interpolation'. This means that it tries to map each pixel in the requested image to the nearest appropriate one in the LCD panel.

If the PC's resolution output is lower than the LCD's native resolution, there will be points where one display pixel needs to show half of one output pixel and half of another. As the display can't set each half-pixel to a different colour, it sets the whole pixel to an average of the two colours. This gives a fuzzier image.

Since this is a wide-screen monitor, it has a different aspect ratio to traditional computer screens. PC screens used to have a 4:3 aspect ratio, such as 640x480, 800x600 or 1,024x768. Widescreens use an aspect ratio that is closer to (but often not exactly) the 'DVD' aspect ratio of 16:9. This may confuse some computer display adaptors, which were designed to use the conventional 4:3 aspect ratio.

DRAWING A BLANK

Sometimes you will find that the monitor displays blank edges in order to show the image in the correct shape. Others stretch the image sideways to fit the screen, which results in a very squashed picture.

Fixing the problem is a simple matter of picking the correct display resolution (1,440x900). First, you need to download and install the latest graphics drivers for your graphics card. Next, you have to open up Display Properties in Control Panel and move the slider to the correct resolution.

Once you have set the correct resolution for your screen, the aspect ratio should look correct. You may find that icons and text are too small to read, but you can fix this in Display Properties by increasing the 'dpi setting'. You will find this in Display Properties by clicking the Advanced button (it should be on the General tab).

Experiment with different settings: Normal is designed to be easy to read on screens with 96 dots per inch (dpi), while Large is intended for 120dpi screens.

Feedback Overheating Belkin router

Q Further to the letter about overheating wireless devices in *Helpfile, Shopper* October 2007, I purchased the exact same model of router, the Belkin F5D7630-4A, over two years ago.

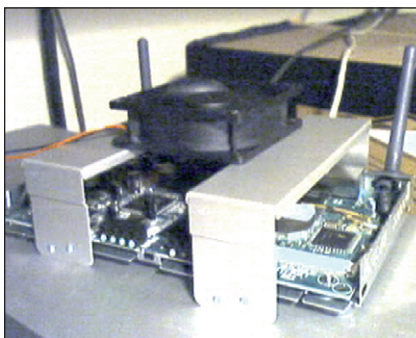
For a while it connected easily with my children's PCs, all of which contain Belkin wireless products. My own PC was connected through a standard Ethernet cable. Even after a short time the unit became hot, and there are no obvious cooling vents. If my son was using his PC, my daughter and I couldn't access the web from our PCs. Then, as the unit became hotter, the connection to my son's PC would eventually drop out.

All the settings were perfect, as the very friendly people at Belkin in Canada told me. The line is perfect, as confirmed by the very friendly BT/Openreach people (who I work for). After I disconnected the unit, allowed it to cool down and then reconnected it, we could all connect. As soon as the unit heated up again, it went

back to the same spiral of events, being unable to connect, dropping connections and so on.

To my dismay, the unit would work correctly only when my son put Blue Freezer Packs underneath and on top of it to keep it cool. Hence, cooling is definitely the problem and Belkin should recognise this fact. I have now changed to the BT Home Hub. We are all delighted with its performance, and I'm not just saying that because I work for the company!

Mark Lowry, matchstickman@btinternet.com



▲ A fan may be able to cure an overheating router

A We didn't have enough room to cover this in *Shopper* November 2007, but some of our readers have found that a very effective cure is to remove the router's top cover and point a fan at the unit (a computer case cooling fan is ideal). I wouldn't recommend freezer packs because of the danger of condensation dripping on to electronic components.

CONTACTS

PLEASE EMAIL THE
RELEVANT DEPARTMENT

helpfile@computershopper.co.uk
for all PC problems

softwarehelp@computershopper.co.uk
for help with software applications

buyinghelp@computershopper.co.uk
for advice on PC purchases

YOU CAN ALSO WRITE TO US AT:

Help
Computer Shopper
30 Cleveland Street
London
W1T 4JD



Newly built PC crashes

Q I bought the bits and pieces to build a new computer back in April, but I didn't get around to assembling everything until last month. Since then I've been trying to resolve a problem on and off for three weeks and have finally had to admit defeat.

I bought an MSI S775 motherboard, Sapphire Radeon X1950 graphics card, Intel Core 2 Duo E6600 processor, 2GB of Corsair memory and two Seagate 500GB drives, which I have configured as RAID 1. The problem is that the system crashes when I try to install Windows XP Professional SP2.

The install process works to the point where Windows starts to load. After the RAID and other drivers have all loaded, it crashes with the blue screen of death and the following message:

"Problem has occurred and Windows has shut down to prevent damage to your computer... Error message reads: ***STOP: 0x0000007B, (0xF78D2524, 0xC0000034, 0x00000000, 0x00000000)"

Do you know what the problem is? I have checked all the physical connections, the setup and configuration and can't find anything wrong. I've run Seagate's disk configuration utility to format the drives, just in case some files were left over from a previous failed installation. I've tried using just one disk without RAID and the same thing happens.

I've come to the conclusion that either the motherboard has a fault or the processor is damaged but, if the latter is the case, why does the PC even start and try to load Windows? This is a brand new system and none of the components has been used before this system was assembled.

Kevin Taylor, kevin.taylor@taylorcontrols.co.uk

A When Windows setup fails, it is almost always due to a hardware problem, such as faulty memory. This case is an exception, though. I think I can tell you exactly what's wrong, because Stop 0x7B means you have an inaccessible boot device. You have installed Windows on a RAID array and Windows XP does not include a device driver for your RAID adaptor.

When you first start the computer, it accesses the hard disk through the computer's BIOS, which includes a BIOS extension for the RAID adaptor. Then, as Windows switches to 32-bit protected mode, it has to bypass the BIOS and access the hardware directly using its own device drivers. At this point it finds that the standard disk driver can't access your RAID controller properly and presents this fatal error.

When you run Windows XP setup, it displays a message that reads: "Press F6 if you have to install a third-party SCSI or RAID driver". After you press F6 the installation continues and prompts you to insert a diskette containing the driver into your floppy disk drive. Microsoft never designed this feature to read anything other than a floppy disk, so you can't use a CD, USB flash drive or another hard disk as the source of the driver. If you don't have a floppy drive, or if your new motherboard doesn't support floppy drives, you should buy a USB floppy drive.

Fortunately, your motherboard has a floppy drive connector, so using that is the easiest solution. The alternative would be to build a custom Windows XP setup CD by 'slipstreaming' the correct driver for your RAID adaptor. Be aware, though, that this is a process of trial and error (mainly error) before you figure out exactly how to slipstream a RAID controller.

We covered how to slipstream Windows installations in *PC Builder* in the September 2007 issue of *Computer Shopper*.

I hate My Computer

Q After many weeks of trying your excellent solutions for removing items from the Windows Start menu, I am still left with My Computer. I have succeeded in removing other unwanted items, but nothing I do will remove My Computer and it is driving me mad.

Roger Taylor, TylRog@aol.com

A The following advice involves editing the Registry, which can be dangerous and leave you with a PC that won't boot, so it is a good idea to create a System Restore point first, just in case you mess something up.

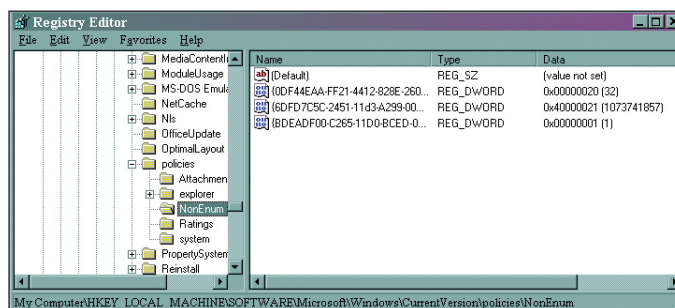
Having done that, run RegEdit and click on the plus keys to navigate to HKey_Local_Machine/Software/Microsoft/Windows/CurrentVersion/Policies/NonEnum. You may or may not see various keys already there in the right-hand window.

You then need to right-click in the right-hand window and select New, Dword Value. Name it {20D04FE0-3AEA-1069-A2D8-08002B30309D}. Be careful that you type it exactly as shown here. Click

on it and give it the value 1. You will need to restart Windows before this change takes effect.

Other Start menu items are easier to remove. In each case, navigate to HKey_Local_Machine/Software/Microsoft/Windows/CurrentVersion/Policies/Explorer and create the appropriate Dword value from those listed below, then set its value to 1:

My Music	NoStartMenuMyMusic
My Pictures	NoSMMMyPictures
My Documents	NoSMMMyDocs
Recent Documents	NoRecentDocsMenu
Favorites	NoFavoritesMenu



▲ Ridding the Start menu of the My Computer icon is trickier than removing some of the other items, and involves some detailed Registry editing

Your experts

HELPFILE

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Paul Mullen

With 27 years of PC experience as a power user, programmer and IT consultant, Paul Mullen answers all PC problems, tackling hardware, system and security issues.



helpfile@computershopper.co.uk

SOFTWARE HELP 176

Kay Ewbank

Database developer and productivity expert Kay Ewbank offers help with office applications.



Ben Pitt

Professional musician and keen photographer Ben Pitt gives advice on using creative software.



softwarehelp@computershopper.co.uk

BUYING HELP

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Chris Finnamore

Labs Manager Chris Finnamore recommends the best products for your requirements.



buyinghelp@computershopper.co.uk

CONTACTS

Please contact the relevant department at the email address listed above. You can also write to us at:

**Help
Computer Shopper
30 Cleveland Street
London
W1T 4JD**

Please try to give full details of your problem. We need an email address or daytime and evening telephone numbers in case we need more information.

Although the policy of *Computer Shopper* is not to publish readers' email addresses, we include them in Help so that other readers with experience of similar problems can share their solution (please also cc any comments to the relevant Help department above). If you would prefer not to have your email address published, please say so.

Windows Mail screws up its database

Q My Dell XPS PC runs Windows Vista Home Premium, and I am having some problems with Windows Mail, which has replaced Outlook Express. I cannot read or delete some of my emails, and I get an error message that reads, "Message could not be displayed, Windows Mail encountered an unexpected problem displaying this message. Check your computer for low memory or low disk space and try again." At the moment I have around 280 emails in my Deleted folder, which I can't get rid of.

I can't use the calendar function for the same reason, and I can no longer even send emails. They just sit in my Outbox. I have 2GB of memory, so I doubt that "low memory" is the problem.

I rang the special Dell XPS support line, which was a waste of time. The guy told me he wasn't experienced with Vista and that I should ring the Presto number, which has a minimum call charge of £20!

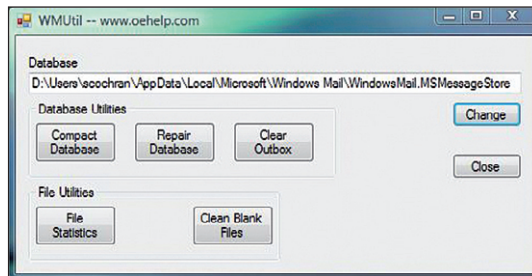
Dell says this is a common Microsoft problem and, as Windows Mail is new, it will be fixed with updates when they arrive. Microsoft tells me there is nothing it can do to help me because Dell loaded an OEM version of Windows Vista on my computer, which means it has to provide support.

Yusuf Patel,

Yusuf.Patel@hmcourts-service.gsi.gov.uk

A If you had bought a retail copy of Vista from a store, Microsoft would have helped you for free because your problem is caused by a bug in its product. When you buy Vista with a new computer, however, the computer maker agrees to provide technical support in return for buying Windows licences at a lower price. Dell should be helping you without charging, and the company even advertises that XPS owners get "special" support service from dedicated support staff.

Windows Mail is a new program that replaces Outlook Express in Windows Vista. Unfortunately, it appears to be rather buggy, and the major bug that almost every user encounters at one time or another is that it corrupts its message database. When Mail's



▲ Use the WMUtil utility to repair Windows Mail's database

database is corrupted and the program tries to read certain messages, it seems to think they are much larger than they really are and presents a misleading message. There is almost certainly nothing wrong with your notebook's memory or the amount of disk space you have.

The problem typically affects a group of files in one folder. It is common for users to find that they can't remove deleted messages, and in some cases the problem involves the Inbox. If so, the affected user is unable to read some or all of their new messages. If the Outbox is affected, they can't even send email.

The first step is to make a backup copy of your Windows Mail directory. This is usually located at C:\Users\yourname\AppData\Local\Microsoft\Windows Mail, but the best way to find it is to click on Tools, Options, Advanced, Maintenance, Store Folder. When you can see the path, click Change, which will enable you to highlight the entire path with the mouse and press Ctrl-C to copy it. Don't actually edit the location, though.

Next, close Windows Mail and use Explorer (or, if you're an expert, a command-prompt) to copy that folder and all its sub-folders to a new location. Having made a backup copy, you can try a special command-line utility called 'essentutl', which Microsoft has provided to repair any damage to the database. Normally you have to run essentutl from a command prompt by typing in a long command. However, there is now a free third-party utility called WMUtil, which has been created by the same people who made Outlook Express repair tools. This runs the essentutl command for you, making it much easier to compact or repair the database. You can download it from www.oehelp.com/WMUtil.

Before running it you need to exit Windows Mail completely. Often, even if all Windows Mail windows are closed, the program still continues to run. So press Ctrl-Alt-Esc or Ctrl-Alt-Del and choose Task Manager. Click on the Processes tab. If WinMail is shown in the list, highlight it and click End task. Then run WMUtil: click the Remove Blank Files button first, then Repair.

All too often this won't fix the problem. If the problem is with the Deleted folder or the Outbox you can try deleting all the .Eml files from the corresponding folder beneath Windows Mail and running WMUtil again. If the problem involves a folder that you created yourself, you can usually fix it by moving all the good messages to a new folder and then deleting the folder, but this won't work for special folders such as Inbox, Outbox and Deleted.

To deal with these special folders, you should navigate to the Windows Mail folder, where you will find a large file called Windowsmail.msmessagestore. Delete this file, ensuring that Windows Mail is closed – otherwise you won't be able to access it. Deleting this file does not delete the actual messages because, despite the file's large size, the messages themselves are stored as individual .Eml files in folders beneath the Windows Mail folder.

Then go to Windows Mail's Backup\New folder and delete the copy of WindowsMail.MSMessageStore there too. When you restart Windows Mail it will take a long time (perhaps as long as an hour) to rebuild the database, hopefully without errors. Your mail will be stored in the 'Recovered Folders' folder, and you can move it to the correct place.

Finally, if this still doesn't work, exit Windows Mail and rename the Windows Mail folder something like Bad Mail. Restart Windows Mail, which will create a new folder, then import the messages from all except the damaged folder of your 'Bad Mail' folders. The imported messages will appear in the Imported Folder, and you will have to move them to the correct place.

To avoid this problem in future, you may want to consider switching to another email program. Many people prefer Mozilla's Thunderbird which, although not entirely without problems, seems to corrupt its database much less frequently than Windows Mail does.

Why is my memory so slow?

Q My PC has an Intel Core 2 Duo processor and 1GB of PC6400 (800MHz) DDR2 RAM. However, when I run the CPU-Z application and click on the Memory tab, it says my memory is running at just 333MHz. What's going on?

Drew Allen

A DDR stands for double data rate, and works by doubling the memory frequency to get its true speed. So, if

you've got a reported memory frequency of 333MHz, you need to double it to find out the speed at which your memory is actually running. In your case, your memory is running at 667MHz (666 isn't used for components specifications), which is still short of your 800MHz speed.

There are two possible reasons for this. First, your motherboard may not support DDR2 800MHz memory, in which case it's running your memory as fast as it can. Check your motherboard's manual for more details.

The other possibility is a problem with the BIOS. This uses a technique called Serial Presence Detect (SPD) to detect memory. If it reads this information incorrectly, it may run the memory too slowly. You can correct it manually by rebooting your PC, going into the BIOS and finding the page for memory timings (usually in the Advanced Chipset Setup). Set the memory speed to DDR2-800MHz (or 400MHz if you have to type the memory frequency manually). Then check your settings with CPU-Z.

Surge protection for the whole office

Q I have a home office with several PCs, network storage devices, printers, LANs (both wired and wireless) and various other network devices such as VoIP and printer interface units. I wish to add electrical protection, especially for surges, but have been unable to find anything appropriate except surge-protection power strips and small UPS units.

I have been unable to find surge protection that can be wired into the dedicated circuit supplying all my equipment. Can you advise? Do I have to buy separate surge-protector strips and stop using all my existing outlets? It seems crazy that I cannot find anything more suited for my type of environment.

Dave Bicket, dpbicket@btinternet.com

A Such products are available, but only at specialist electrical suppliers, such as Bowthorpe EMP (www.buildingdesign.co.uk/elec/tyco_bowthorpe).

Apart from being hard to find, protection that covers an entire building or circuit does



▲ It is safer to place surge-protection devices close to the equipment they are protecting

not offer complete protection. The problem is that electrical surges don't just come through the electrical grid from outside your building.

If the only threat was from external power sources, we could add a surge protector for the whole building. However, although we imagine lightning hitting a power line and travelling along it, more often than not the lightning travels by radiated EMF through the air and is picked up by electrical cables in the building, or hits the

ground and travels as a surge in ground potential to nearby buildings. In fact, as power lines are usually buried these days, lightning-induced surges are more likely to enter through TV antennas, telephone lines or cable TV lines.

Then there is another kind of surge, from industrial equipment with large electrical motors, such as circular saws and other power tools. These motors generate 'spikes' when they start up. Even if they are on separate circuits in the building, the wires often run side by side through the same conduit boxes, and each wire creates an electromagnetic field around it. A surge on one circuit can induce surges in others.

For these reasons it is better to place surge protectors near the equipment, with the shortest possible cord between the computer and the surge protector. Good surge protectors usually come with free insurance policies, and should always have an indicator light to show whether the suppressor is working properly. Make sure you get surge protectors that protect network, telephone and TV/cable lines, too. Belkin and APC are quality brands and easy to find.

Virgin Media won't see my router

Q I am trying to use a Linksys WRT300N router to set up a wireless network to at least one PC and a PlayStation 3, with another PC connected either by wireless or Ethernet. My ISP is Virgin Media (previously called NTL) and I have an NTL-Home 200 modem.

I have connected everything according to the instructions, but the internet light does not show up on the router. As far as I can tell, it should simply be a matter of plugging it in and everything should work. Are there settings that I need to change on the router or the PCs? If not, is there a router that I can buy to use with, or even replace, the NTL modem I currently have?

Neil Holmes, neil.holmes@dreamteam0708.co.uk

A As you say, it should all work, but in practice, problems can occur. Unlike ADSL broadband, where you can connect pretty much any ADSL modem to your line, cable internet providers often choose to provide the equipment without charge and so restrict the equipment you can use.

In fact, even if you were to buy a used NTL cable modem, which you sometimes see for sale on eBay, it wouldn't work until Virgin Media had entered its serial number into your account details. This is how the company is able to cut off your service if you don't pay your bill. So no, you can't buy a router with a cable modem built in.

Fortunately, all NTL cable modems include an Ethernet port as well as USB. I prefer Ethernet because it is easier to set up and runs faster than USB, as the drivers for USB modems put a heavy load on your processor.

As you say, it should just be a matter of plugging in an Ethernet cable between the

modem's Ethernet port and the router's WAN port. Make sure you don't use a cross-over cable by mistake – if you hold the two ends side by side, you should see that the wires are connected in the same order. If not, you need to buy a standard Ethernet cable.

The most important thing to remember is that you must always power off the cable modem and then turn it back on whenever you plug a new piece of equipment into its Ethernet port. Until you cycle the power, the modem won't see the new equipment. After turning the power back on it is a good idea to wait until the modem has finished initialising and its ready lights are on before powering up the router. According to Virgin Media, waiting before powering up the router solves most problems.

The single biggest problem with Linksys routers is the software on the CD that comes with them. This is supposed to detect the type of connection you have automatically, but I have often seen it get this wrong. I find it much easier to throw the software away and use a web browser to configure the router. In fact, you should start by pressing the reset button on the router until all the lights flash. This will reset everything to the factory default settings, which should work just fine. You will still have to configure wireless networking, though.

It's a good idea to configure the router from a computer that is connected directly to it with an Ethernet cable, as using wireless to do this may cause problems. First, click on Start, Run and type cmd, then click OK. This will open a command prompt window. In this window type ipconfig and press Enter. This should show you the IP address that the router has assigned your computer. For example, your IP address may be 192.168.1.101 with a default gateway address of 192.168.1.1. The gateway address is the address of the router. Now open your web browser and

type that IP address into the address bar. You should get a login prompt. In your case the username is admin and the default password is also admin. Some Linksys routers have a default password of Password, or none at all.

On most routers you will now have access to the setup menu, or the device may offer to walk you through the setup process step by step. The important part is the internet connection type, where you choose between dynamic IP address, PPPoE/PPPoA login or static IP. You should select dynamic IP. PPPoE and, more often, PPPoA are used by most ADSL connections, while static IP is usually found only on more expensive business accounts. Having done this, click the Apply button and you should soon see the allocated IP address on the status tab.

While you are in setup, don't forget to change the Wireless SSID to something less obvious than 'Linksys'. You should also set up the wireless security.

Hopefully, this will get you up and running, but if the router still can't see the cable modem, try cycling the power just to the router again. These NTL-modem Ethernet ports seem to have an auto-detection capability that can be rather flaky. When you connect an Ethernet device, the port tries to figure out the speed at which to connect (10 or 100) and such things as whether to operate at half or full duplex. Problems occur when the other Ethernet port is also trying to auto-detect and adapt, as the two can end up out of step.

Some routers may allow you to fix the speed and duplex configuration to avoid this, but most don't give you the opportunity. If you can't do this, updating the router's firmware, or changing to a different brand of router, may solve the problem. Virgin Media provides fairly comprehensive advice at www.virginmedia.com/digital/homenetworking.

How much longer can PS/2 go on?

Q In your opinion, how much longer will new motherboards, peripheral manufacturers and operating systems continue to support PS/2?

Stephen Bernhoeft, sjb@abelgratis.co.uk

A PS/2 has been around for 20 years now, and I don't expect it just to disappear overnight. The PS/2-style keyboard and mouse connectors first appeared in 1987 on IBM's Personal System/2 computers. The mouse connector was new, replacing the older serial mice, but the keyboard used the same electrical specifications as the AT-style keyboard that IBM had first introduced in 1984, but with a smaller connector. That connector still seems to be a feature of many new motherboards.

For several years now Microsoft has been discouraging the use of 'obsolete' devices, such as parallel printer ports, serial ports and PS/2 ports, all of which can potentially be replaced by USB ports. Supporting these old devices requires a little bit of extra code in Windows and, in particular, it complicates power management. However, even Windows Vista supports PS/2 keyboards and mice.

While Apple simply forced everyone to use USB by not providing any other ports on its computers, Microsoft doesn't have the same control over hardware. It can only make recommendations, which it does by means of joint Microsoft-Intel PC Design Guides. These started back in 1996 when

the companies introduced a specification called PC97, which was followed by PC98, PC99 and PC2001. After that they gave up. You can still find all these design guides on the Microsoft website at <http://tinyurl.com/3cp3b8>, although they are only really of historic interest now.

These design guides were responsible for dropping features such as ISA bus card slots, as well as removing 'legacy' ports such as the parallel printer port. At around the same time the companies saw USB as the solution to everything, but unfortunately the USB design has some serious flaws that still make it temperamental.

It is not uncommon to find that a USB keyboard and mouse don't work, and the only solution is to plug in a PS/2 keyboard, provided you have a PS/2 keyboard port on the motherboard. So, although the Design Guides have been recommending the use of a USB mouse and keyboard ever since PC98, and PC2001 strongly discouraged the use of legacy ports, none of the design guides actually prohibited makers from providing PS/2 ports.

You would think that motherboard manufacturers would be keen to save money by dropping these 'obsolete' ports. However, they know that many PC owners still want them, so while we see many new computers, particularly from Gateway and Dell, that provide



▲ PS/2 ports (circled) are here to stay, even though most PCs also come with plenty of USB ports

only USB ports, there are still plenty of new computers (including most HP models) that have PS/2 connectors, too.

It has become increasingly rare for notebook computers to come equipped with a PS/2 port. USB mice are more commonly used.

Most keyboard and mouse manufacturers have hedged their bets by designing devices that can operate with both PS/2 and USB ports. You will often see cheap adaptors that enable a PS/2 mouse to plug into a USB port or a USB mouse to plug in to a PS/2 port, and new keyboards and mice often come with one of these. However, the adaptors won't work with just any keyboard or mouse. The device has to have been designed to work with both types of port.

While the situation could change quickly if new chipsets stop supporting PS/2, I suspect we will still see PS/2 ports on desktop computers for quite some time to come.

Recovering data from a damaged hard disk

Q I have a 160GB Samsung SP1604N hard disk, which is formatted with NTFS. It has lost its partition information and now displays its size as just 32GB. When I try to explore the drive in Windows XP, it prompts me to format it.

I am trying to restore my data with Winhex, a low-level disk editor, which can see all the directories and files. The problem is that it takes forever, working for over six hours on a 25MB file, and I need to recover a couple of gigabytes. I am using a Pentium 4 2GHz processor with 384MB of memory.

Would trying to restore the partition first enable me to get the data back from within Windows?

Jeff Ruetten, via email

A The slow speed suggests that something very strange is going on with access to the physical drive. You may, for example, have a failing spindle or other physical problem, which could be causing lots of retries before it reads each sector.

I suggest that you make a physical copy of the entire drive to a known good drive first, and then repair the file structures on that copy.



▲ Slow disk access can indicate that your drive is about to fail, so act fast to save your data

This way you have to go through the slow reading procedure only once to access sectors. What's more, sequential access to adjacent sectors is usually faster than random access.

It may simply be that sector 1 of the drive is bad. This can make a drive incredibly slow to access in Windows, as it keeps re-reading sector 1, which is the Master partition record.

I still think copying the drive is the best solution, but if you don't have an empty drive available, and want to take a chance, you could use a tool such as MHDD (from www.hddguru.com) which can test and map out bad sectors, using a spare sector to replace bad sectors.

Then you can use Winhex (www.winhex.com) to repair the partition record. Copy sector 1 from a good drive, then go to sector 63, press Ctrl-F12 to access templates and select NTFS Boot sector. Read the size in sectors and add one to this number (for the second copy of the boot sector) to get the correct size of the partition. While you are there, note the number of heads and sectors. There are usually either 256 or 240 heads, and almost always 63 sectors.

Now go back to sector 1, press Ctrl-F12 to use the template for the Master Partition Record and edit the correct values. If there is only one partition on the drive, with no additional diagnostic partitions and so on, the partition will start at sector 63 and have the length you just calculated. This value will be one more than the value in Boot sector.

The CHS data is almost, but not quite, obsolete. The boot loader still uses the starting cylinder head and sector (usually 0, 1, 1 if the partition starts at 63) and the end cylinder is almost always 1023 (for partitions greater than 8GB). The end head should be one less than the number of heads indicated in the boot sector (usually 254, or sometimes 239), while the end sector will almost always be 63. ☐